



Development news

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Welcome to a new issue of Development News published by Forest & Landscape Denmark (FLD), Faculty of Science, University of Copenhagen.

We report on our new projects, education programmes, arrangements and publications.

Among other reports in this issue, please find articles on

- How a research cooperation aims to establish the potential consequences of increased nitrogen inputs in the warm and humid parts of China.
- Effects of Joint Forest Management on bushmeat hunters and wildlife in the Udzungwa Mountains, Tanzania
- Phase II of the forest conservation project on Flores, Indonesia

Yours sincerely
The Editor



PROJECT NEWS

High nitrogen pollution in South China

A research cooperation between Forest & Landscape and South China Botanical Garden aims to establish the potential consequences of increased nitrogen inputs to the forest types found in the warm and humid parts of China.

While the emissions of nitrogen to the atmosphere have decreased in Europe, they are increasing rapidly in Asia in regions with strong economic growth and some of the world's highest nitrogen inputs to forest are found in South-eastern China.

Every year up to 70 kg of nitrogen per hectare (or 10 times more than normal) enters forests of these regions with tropical or subtropical climates. The possible consequences of elevated nitrogen

input to such warm humid forests have only been addressed in few studies world-wide. Researchers expect tropical forests to have enough nitrogen, and inputs from pollution will provide excess nitrogen likely to be lost by leaching to ground and surface waters. This will cause soil acidification and nitrate pollution of waters. A compilation of available data from China indeed showed that in many Chinese forests, nitrogen was passing through the ecosystem and ended up in forest waters. However, forests that had been cut and exploited for fuel and fodder could still retain a part of the nitrogen.

To study the effects of elevated nitrogen deposition the first field scale nitrogen input manipulation study under warm and humid climate was established in 2004 at the Dinghushan Biosphere Reserve, China in cooperation with Forest





& Landscape. The impact of several levels of nitrogen deposition is studied in a land use gradient from old growth natural rainforest over an ecosystem in succession to a plantation forest.

Recent Publications:

- Atmospheric deposition and leaching of nitrogen in Chinese forest ecosystems: **Fang, Y., Gundersen, P., Vogt, R.D., Koba, K., Chen, F., Chen, X.Y., Yoh, M.** Journal of Forest Research Volume, 6, Number 5, 2011, p 341-350 DOI: 10.1007/s10310-011-0267-4
- Effects of phosphorus addition on soil microbial biomass and community composition in three forest types in tropical China. **Liu, L., Gundersen, P., Zhang, T., Mo, J.** Soil Biology and Biochemistry, Volume 44, Issue 1, 2012, p 31-38. DOI: 10.1016/j.soilbio.2011.08.017

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Social Dimensions of REDD A Comparative Perspective

Research and fieldwork experiences
across three continents

Seminar at University of Copenhagen /
KU - SCIENCE, June 11, 2012



Download programme,
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Science for Better Shea

Shea (*Vitellaria paradoxa*) is an important tree species found in semi-arid agroforestry parklands from Senegal to Uganda. Local people have for millennia extracted Shea butter from the dried kernels of the shea fruits, and used the butter for multiple purposes such as cooking, skin pomade, medicinal applications, soap, lanterns, and for cultural purposes at ceremonies. Today, Shea nuts have also become an important export commodity used in food and cosmetic industries.

'Innovative Tools and Techniques for Sustainable Use of the Shea Tree in Sudano-Sahelian zone (INNOVKAR)' was an EU supported project coordinated from CIRAD, France, with participants from Uganda, Burkina Faso, Mali, Senegal and Ghana as well as from Germany, United Kingdom and Denmark. The project, which came to an end in 2011, organised a final conference 'Science for better Shea' in Ouagadougou, Burkina Faso, 24-26 October 2011. The objective of this conference was to present major finding and discuss their implications with Shea stakeholders.

The three day conference included the following sessions:

- The natural shea resource and its sustainability.
- Farmers varieties, domestication and breeding.
- Geographic structure and ecotypes.
- Quality and origin.
- New products, post harvest processing, markets and value chains.
- Future Challenges.

Each session combined with presentations by INNOVKAR scientists with stakeholder interventions and joint discussions. A total of 30 oral presentations were combined with a number of posters displayed and discussed throughout the conference.

Abstracts of presentations can be downloaded from the website of the project: [Link](#)

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Do you have a specific question or a topic to discuss?
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Landscape, University of Copenhagen:

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Effects of Joint Forest Management on bushmeat hunters and wildlife in the Udzungwa Mountains, Tanzania

The Udzungwa Mountains in Tanzania form part of the Eastern Arc, which is widely known for its biodiversity and high density of endemic species some of which are severely threatened. The forests in these mountains are generally 'protected' as catchment reserves but access has proven difficult to control by the central government's forest authorities.

Turning these forests into national parks is economically and politically unrealistic, so efficient and effective conservation of their unique biodiversity remains a major challenge. To address this, Joint Forest Management (JFM) where local village governments, together with the catchment forest offices, manage these forests, has been implemented by the Government of Tanzania and assisted by a number of international donors including the World Bank, the Danish, Finnish, Swedish and Norwegian governments, and a number of international and national NGOs.

Using bushmeat hunting as an indicator, and based on a seven year "before and after JFM" temporal comparison, the effect of JFM in the New Dabaga Ulangambi Forest Reserve in the Udzungwa Mountains, Tanzania, was evaluated. Results show



that JFM effectively reduced bushmeat hunting thus facilitating wildlife recovery. This is very encouraging as no previous interventions have delivered such conservation benefits. However, the change in management regime has had negative consequences for hunters' livelihoods. More-over, due to poor design, poor implementation modalities and lack of political support from the central government, village-level JFM institutions had turned undemocratic and sometimes corrupt. This undermined hunters' willingness to comply with wildlife management rules and began to turn local patrol guards off their duties or into poachers. Thus, the results suggest that JFM can work as intended if fundamental governance problems are adequately addressed.

Source: **Nielsen, M.R. and Treue, T. 2012.** Hunting for the benefits of Joint Forest Management in the Eastern Afromontane Biodiversity Hotspot: Effects on bushmeat hunters and wildlife in the Udzungwa Mountains. World Development 40 (6): In press

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CLimate change and Urban Vulnerability in Africa (CLUVA)

The EU 7th framework project CLUVA has recently held its second General Assembly in Pretoria where the partner CSIR (Council for Scientific and Industrial Research) is situated. CSIR works with climate modelling and downscaling to African cities.

The project is a collaboration between 5 European partners, 1 South African and 5 case cities and university partners in Africa; Ouagadougou, St. Louis, Douala, Dar es Salaam and Addis Ababa. The project is made up of three research work-packages; (WP 1) climate scenarios and their downscaling to city level, (WP 2) vulnerabilities to climate changes focusing on the vulnerabilities of urban residents, green areas, infrastructure and buildings and (WP 3) building up city resilience with focus on governance and urban planning.

Forest & Landscape leads WP 3 and collaborates with NIBR (Norwegian Institute for Urban and Regional Research) and the case cities of Addis Ababa, Dar es Salaam and St. Louis in Senegal. The WP is structured around two analytical tasks and one strategic. The first assesses the institutional set-up in the cities in relation to disaster preparedness and for adapting to climate change. The second task is developing spatial indicators for vulnerability and prepares vulnerability maps for the case cities. The last task facilitates adaptation strategy making in the cities.

In November 2012 Forest & Landscape is hosting a large CLUVA meeting in Copenhagen with all partners present. The meeting will gather the preliminary results of CLUVA and facilitate climate change adaptation planning with training and seminars on stakeholder involvement and urban planning. www.CLUVA.eu

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"The trail to Mbeliling", Sustainable and Integrated Management of Mbeliling Forest, Flores, Indonesia, phase II, 2011-2014

Phase II of the Danida supported forest conservation project on Flores Indonesia implemented by Birdlife Denmark (Dansk Ornitologisk Forening – DOF) in collaboration with Birdlife Indonesia (Burung Indonesia) and FLD was initiated late 2011.

FLD will support the project with the preparation and implementation of a Strategy Plan for Improvement and Diversification of Tree Planting, comprising three elements:

- 1) Agroforestry and tree planting for commercial purposes
- 2) Replanting of trees for protection of water and soil
- 3) Use of native species to conserve the flora and fauna.

Focus of the project is on collaboration with the 27 villages bordering the Mbeliling forest. Nursery development, establishment of an Arboretum of native tree species and future seed sources will be done in close collaboration with Dinas Kehutanan (the District Forest Office) to improve the current and future supply of seedlings from local nurseries to the communities as well as the government planting programmes.

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New publications

Briefs

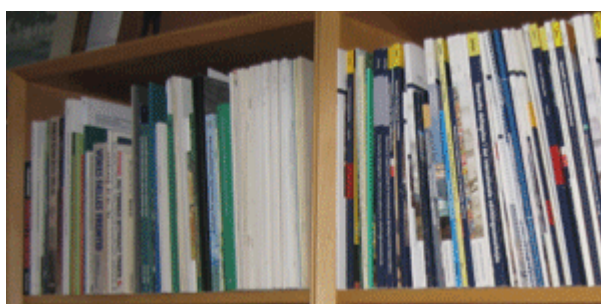
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Articles

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DOI:10.1155/2012/265831



Note: All publications published by FLD, e.g. Development and Environment, Seed Leaflets, Working Papers and most 'Other Publications' can be downloaded free of charge from our homepage. [Outreach and Publications](#)

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